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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,897	02/10/2006	Carlo Cognolato	05788.0356	5161
22852	7590	12/01/2009		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1791	
			MAIL DATE	DELIVERY MODE
			12/01/2009 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,897

Applicant(s)

COGNOLATO ET AL.

Examiner

John Hoffmann

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "nozzle" is indefinite as to its meaning for the reasons previously given. See below also.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Cain 5922100.

Looking figures 3 and 4: 38 and 92 are of a torus/donut shape. This is clearly commensurate with the definition on page 3 of the present specification. The nozzle can eject substantially any fluid; ejection is method step which does not define structure over that which Cain has. It is noted this not to be interpreted as giving the limitations

no weight: each word of all the claims has weight. However the intended use limitations are very broad and fail to define over Cain.

Alternatively, Figure 6 of Cain shows an axial cross-section. Feature 108 is concave shaped cross section. Additionally, one can consider empty space which delimits the path that the gas takes from where it enters the 120 on the far left of the drawing – until it exits on the far right: such in convex. That is: the shape/path 120 is wide on the far right of block 107, is constant and narrower through most of block 107, and then widens just before it gets to tube 108 – wherein the path becomes much narrower. The shape is clearly convex (as defined by applicant) because of the two widening portions.

92 and/or block 102 are both annular and both can be considered a nozzle, and both surround 90 and 108. Examiner finds that either (or both) empty spaces or physical structure are encompassed by “nozzle” in the present application. Because 1: the plain meaning of ‘nozzle’ encompasses physical structure. 2: applicant has indicated by way of the drawing that the term “nozzle” was intended to cover empty spaces within structure, and 3: applicant has not given any indication that the term ‘nozzle’ was intended to exclude the plain and ordinary meaning of the term.

Claims 15-16 are clearly met.

Claim 17 is met. For example one port of 94 (of figure 4) is circular and is between 92 and crown of 98.

Claim 18: applicant does not define "sectors" nor give any examples of any. Examiner notes that "sector" does have a geometrical meaning: a figure bounded by two radii and the included arc of a circle. A piece of pie. Applicant does not disclose such a shape – beyond the use of the word "sector". The most similar disclosure (in examiner's opinion) is figure 2. However, none has a radius - at most, half have half radii. In other words: applicant's sectors have imaginary radii. Examiner finds that applicant's sectors comprise imaginary boundaries. Therefore the broadest reasonable interpretation of "sector" encompasses sectors having no real (physical) radii. Thus, it is clear that Cain reads on this broadest reasonable interpretation, since one can consider the Cain nozzle to have similarly imaginary radii. The inner circle of 38 (torus) would be the minimum radial dimension, and the outer limit the maximum radial dimension.

Claim 19: See figure 3 of Cain: one would easily recognize eight sectors of 45 degrees or sixteen sectors of 22.5 degrees each with 44 and 42 each being one of the claimed sets.

Claim 20: is clearly met

Claim 21: 112 is the central duct that is exiting into the central nozzle. 108 is the central member therein.

Claim 22: the left most portion is the enlarged portion.

Response to Arguments

Applicant's arguments filed 8/31/2009 have been fully considered but they are not persuasive.

Regarding the rejection that the term "nozzle" makes the claims indefinite, applicant argue that the objectionable language has been removed. This is unconvincing because the amendment only removes the term "orifice". Applicant gives no argument or assertion that the term "nozzle" is definite in the present claims. As indicated previously, the term "nozzle" appears to be used to indicate the nothingness within a structure. However the term "nozzle" is conventionally understood to be physical structure – often a tube or tube-like feature. Examiner sees nothing in the present arguments which serve to point out how one of ordinary skill would be able to understand what is meant by "nozzle" in the present claims. Although the specification refers to ducts, passageways and nozzles, there is nothing which serves to distinguish these - except for the embodiments shown in the drawings.

It is argued that Cain does not disclose the central nozzle and annular nozzle as claimed in claim 14. Examiner disagrees - see the above rejection. Whereas Applicant agrees (p. 8 of 8/31/09 response) that Cain has a central nozzle surrounded by an annular opening, Applicant asserts the central nozzle does not have a concave cross section. Applicant then points out since it has a circular cross section, it is excluded by applicant's definition of 'concave'. Examiner disagrees, because applicant apparently is using a rather narrow interpretation of the claim language. The Office uses the

broadest reasonable interpretation of the claim: The claim is *comprising* in nature- although it requires one cross section shape that is concave, it is open to having any number of other cross sections which are not concave. Thus the fact that Cain has a non concave cross section shape does not mean other shapes are not concave. As pointed out above, Cain has an axial cross section shape which is concave - thus reading on the present claim.

Furthermore, it is clear from page 4 of the Office action, Examiner refers to 38 and 92 as having a torus/donut shape and explaining that this meets the definition of page 3. It is clear that it was Examiner position that 38 and 92 were considered to be the central nozzle. Applicant has not disputed this. Nor has applicant disputed the assertion that a torus/donut shape meets applicant's definition for concave. A circle and a torus are two different shapes.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann
Primary Examiner
Art Unit 1791

/John Hoffmann/

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Primary Examiner, Art Unit 1791